

## **816 PILES**

### **816.01 TIMBER PILES**

Timber piles shall meet the requirements of AASHTO M 168 for piling.

Timber piles shall be treated with creosote oil by the empty cell process. Creosote oil for piles shall conform to AASHTO M 133. The preservative treatment shall be in accordance with FS TT-W-571.

### **816.02 STEEL H-PILES**

Steel H-Piles shall conform to AASHTO M 183 or AASHTO M 223.

The piles shall be of the size and weight per foot indicated on the plans, and shall conform at the time of driving to camber and sweep as permitted by allowable mill tolerances.

Piles including splice pieces shall be cleaned of all rust and other foreign matter prior to shipment.

Cap plates for H-Pile Thrust Block shall be steel plate per AASHTO M 183 of appropriate size and thickness.

### **816.03 CAST-IN-PLACE PILES**

Metal shells shall be made of structural steel having a minimum tensile yield strength of not less than 50,000 psi. The metal of shells driven with a mandrel shall have a minimum allowable thickness of No. 18 U.S.S.G. Metal shells directly driven without a mandrel shall have a minimum allowable thickness of No. 11 U.S.S.G. Metal shells be of sufficient strength and rigidity to permit driving, and to prevent distortion caused by soil pressures or the driving of adjacent piles, until filled with concrete. The shells shall also be sufficiently watertight to exclude water during the placing of concrete.

The piles shall preferably be tapered and shall have a minimum tip diameter of 8 inches and minimum butt diameter of 12 inches. Combination piles with a tapered section and a constant section, if used, shall have a minimum tip diameter of 8 inches and a minimum butt diameter of 12 inches. The tapers shall conform with the manufacturer's standards. Piles of constant section, if used, shall have a minimum diameter of 12 inches. All diameters referred to herein are outside diameters.

### **816.04 UNFILLED TUBULAR STEEL PILES**

The metal for unfilled tubular steel piles shall conform to the requirements of ASTM A 252, Grade 2 and the chemical requirements of ASTM A 53, Grade B.

### **816.05 BITUMEN COATING FOR STEEL PILES**

Canal liner bitumen (ASTM D 2521) shall be used for coating. The primer shall conform to the requirements of ASTM D 41.